

Remarks

This paper is in response to the Office Action mailed February 6, 2007. A petition for an extension of time requesting an additional one month to respond to the Office Action accompanies this paper. Claims 12 and 14 are being amended and claims 19 and 20 are being added. In view of the above amendments and following remarks, Applicant respectfully requests the issuance of a Notice of Allowability for claims 1-20.

In the Office Action, the drawings were objected to under 37 CFR 1.83(a) for failing to show a closable housing recited in claim 9. A closable housing is shown in Fig. 3 and described in Applicant's original disclosure on page 6, last paragraph through page 7, first paragraph. In particular, Fig. 3 discloses a connecting element 35 comprising a closable housing in the form of a central tubular body 37 having structure which cooperates with locking caps that close the ends of the body 37. Accordingly, Applicant respectfully requests withdrawal of the objection to the drawings.

In the Office Action, claim 12 was rejected under 35 U.S.C. 112, second paragraph, for being indefinite for failing to distinguish "outer openings" from other openings and to clearly indicate where the "pull relief means" is provided and what its arrangement is with the frame. Claim 12 is being amended to delete the reference to outer openings and to indicate where the "pull relief means" is provided and what its arrangement is with the frame. Accordingly, withdrawal of the rejection of claim 12 under 35 U.S.C. 112, second paragraph is respectfully requested.

In the Office Action, claims 1-5, 8-11, 17, and 18 were rejected under 35 U.S.C. 103(a) as being unpatentable over Hensgen (U.S. Pat. No. 2,663,081) in view of Yowell (U.S. Pat. No. 5,462,355). Hensgen discloses a cheese curd cutter including an upright cylindrical vat in which two cutting frames may be rotated in opposite directions on a common vertical axis. The cutting frames have a rectangular shape and each are provided with a plurality of intersecting cutting wires secured to the frames. The manner in which the wires are actually secured to the frames is not disclosed. Yowell discloses a mixing-cutting paddle including wires strung between arms. The wires are secured to outer arms by set screws that impinge upon the wire ends.

Claim 1 of the present application claims a cutting frame for a cheese vat for at least preparing curd for soft fresh cheese. The cutting frame includes a cutting wire system, and has a frame having at least two opposite frame parts between which cutting wire sections extend, which frame parts are provided with openings for receiving a cutting wire, wherein the ends of a cutting wire are each fastened via pull relief means. Neither of the above cited references disclose or suggest fastening the ends of a wire to a frame via a pull relief means.

As discussed above, Hensgen does not disclose how the ends of the wire are fastened to the frame. Yowell discloses securing the ends of the wires to the frame using set screws. See col. 2, line 67-col. 3, line 4 and col. 3, lines 44-50 of Yowell. Nothing in Yowell suggests using a pull relief means. The set screw disclosed in Yowell impinges on the wires to secure the wires to the frame, and therefore does not provide pull relief. Accordingly, Applicant respectfully asserts that claim 1 is allowable over Hensgen in view of Yowell.

Claims 2-5, 8-11, 17, and 18 depend from claim 1, which as discussed above is believed allowable over Hensgen in view of Yowell. Accordingly, withdrawal of the rejection of claims 1-5, 8-11, 17, and 18 under 35 U.S.C. 103(a) is respectfully requested.

In the Office Action, welding the ends of the wire was given no patentable weight. Applicant respectfully asserts that the present invention allows the use of welding to secure the wire ends contrary to the knowledge of one skilled in the art. In particular, one skilled in the art knows that welding the wire causes the wire to lose strength near the weld. See page 8, lines 16-25 of Applicant's original disclosure. The novel structure of the wire end welded down on the frame part beyond the pull relief means, as claimed in claim 12, solves the problem of the weld weakening the wire by reducing the pull on the wire proximal the weld. See page 9, lines 20-22 of Applicant's original disclosure. Accordingly, Applicant respectfully asserts that claim 12 of the present application is allowable in its own right.

In the Office Action, claims 1 and 6 were rejected under 35 U.S.C. 103(a) as being unpatentable over Hensgen in view of Bleick (U.S. Pat. No. 4,646,602). As discussed above, Hensgen discloses a cheese curd cutter including cutting frames having plurality of intersecting cutting wires secured to the frames. Hensgen fails to disclose how

the wires are actually secured to the frames. Bleick is cited to satisfy this deficiency. As discussed below, however, Bleick fails to satisfy the deficiency in Hensgen.

Bleick discloses cutter wires extending over radius edges in order to greatly reduce cutting wire breakage. See col. 6, lines 55-62 of Bleick. These radius or rounded edges provide a guide surface to smoothly transition the wires through a change of direction to reduce wire breakage. The smooth guide surface provided by the radius edges fails, however, to provide pull relief, as claimed in the present application, for the same reason that breakage is reduced. In particular, the smooth transition allows the cutting wire to slightly move over the rounded guide surface when a cutting force is acting on the wire perpendicular to the long dimension of the wire. This movement transmits the pulling force through the change of direction.

The present invention provides pull relief by passing the cutting wire through a sharp transition between the last cutting section and the site where the end of the cutting wire is fastened. This sharp transition is provided by wrapping the wire around a post, such as shown in Fig. 6 of Applicant's original disclosure, or changing the direction of the wire using a sharp edge, such as shown in Figs. 7-9 of Applicant's original disclosure. Bleick fails to disclose or suggest this structure. Accordingly, Applicant respectfully asserts that Bleick fails to disclose pull relief means, as claimed in the pending claims of the present application. Therefore, Applicant respectfully asserts that claim 1 is allowable over the cited references.

Claim 6 depends from claim 1, which as discussed above is believed allowable over Hensgen in view of Bleick. Accordingly, withdrawal of the rejection of claims 1 and 6 under 35 U.S.C. 103(a) is respectfully requested.

In the Office Action, claims 1, 7, and 12-16 were rejected under 35 U.S.C. 103(a) as being unpatentable over Hensgen in view of Baril (U.S. Pat. No. 5,207,137). As discussed above, Hensgen discloses a cheese curd cutter including cutting frames having plurality of intersecting cutting wires secured to the frames. Hensgen fails to disclose how the wires are actually secured to the frames. Baril is cited to satisfy this deficiency. As discussed below, however, Baril fails to satisfy the deficiency in Hensgen.

The present invention provides pull relief to a wire end fastened to a structure. The pull relief reduces the occurrence of the wire being separated from the structure by

pulling. Baril discloses winding a wire end onto a thumb screw to tighten the wire in the frame. The wire end is wrapped around the thumb screw to fasten the cutting wire relative to the frame. Nothing, other than friction, fastens the wire end to the thumb screw. Moreover, the end of the cutting wire is not fastened to any other structure for which the thumb screw can provide pull relief. As a result, the wire end is not fastened to a structure for which pull relief can be provided. Therefore, the thumb screw cannot provide pull relief for the wire wrapped thereon. Accordingly, Baril fails to disclose pull relief means, as claimed in claim 1 of the present application.

Claims 7, and 12-16 depend from claim 1, which as discussed above is believed allowable over Hensgen in view of Bleick. Moreover, as discussed above, Applicant respectfully asserts that claim 12 is allowable in its own right. Accordingly, withdrawal of the rejection of claims 1, 7, and 12-16 under 35 U.S.C. 103(a) is respectfully requested.

Claims 19 and 20 are being added to more clearly claim a preferred embodiment of the invention. Claim 19, in particular, claims a cutting frame for a cheese vat for at least preparing curd for soft fresh cheese. The cutting frame includes at least two opposite frame parts. At least one of the frame parts has an opening for receiving a cutting wire. A cutting wire having first and second ends extends from the first end, between at least two of the at least two frame parts, and through the opening to the second end. The second end of the cutting wire is secured relative to the frame. Pull relief means engage the cutting wire between the opening and the second end of the cutting wire to relieve a pulling force on the second end of the cutting wire. Claim 20 depends from claim 19, and recites the limitation of the second end of the cutting wire is secured relative to the frame by a weld. The subject matter of new claims 19 and 20 is disclosed in Applicant's original disclosure, and is thus not new matter.

As discussed above, none of the cited references disclose or suggest fastening the ends of a wire to a frame via a pull means. Likewise, none of the cited references disclose or suggest pull relief means engaging a cutting wire between an opening in a frame part forming part of a frame and an end of the cutting wire secured relative to the frame to relieve a pulling force on the end of the cutting wire, as recited in new claim 19. Moreover, as discussed above, none of the cited references disclose or suggest the novel structure of the second end of the cutting wire secured relative to the frame by a weld

beyond the pull relief means, as claimed in claim 12 and new claim 20. Accordingly, Applicant respectfully asserts that new claims 19 and 20 are allowable over the cited references.

In view of the above remarks and amendments to claims 12 and 14, Applicant respectfully asserts that the present application is in condition for allowance. Accordingly, a Notice of Allowability indicating the allowance of claims 1-20 is respectfully requested. No additional fees for filing this response are believed to be due, except for the fee for an extension of time, however if any additional fees are due, including fees for an extension of time, please charge the fees to deposit account no. 17-0055.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "D. G. Radler", written over a horizontal line.

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